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March 2, 2004

Ms. Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, Rhode Island 02888

Dear Ms. Massaro:

We are filing, herewith, for effect April 1, 2004, tariff material consisting of:

RI PUC No. 15

Part/Section	Revision of Page(s)	Original of Page(s)
TOC	45 and 66	N/A
D/1	N/A	12 through 21
M/4	N/a	4 through 12

The purpose of this filing is to introduce a new service offering called Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS) in Rhode Island. This service is a telecommunications transport and switching service that provides for high-speed connectivity between and among customer-designated locations. ATM supports user applications requiring high-bandwidth, high-performance transport and switching. ATM carries mixed-media traffic, ranging from sensitive voice and video to web-browser based (data) traffic. ATM combines the multiplexing and bandwidth efficiency of packet switching with the predictability and reliability of circuit switching.

Verizon certifies that the rates for Asynchronous Transfer Mode Cell Relay Service are not less than the Long-run Incremental Cost of providing the service.

If you have any questions regarding this filing, please contact Frances O'Neill-Cunha of my staff at 401 525-3560.

Enclosed are an original and nine copies of the tariff material. Please return a copy of this letter with your stamp of receipt.

Respectfully submitted,

Theresa L. O'Brien

Verizon Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS)

Tariff Introduction

Rhode Island

Tariff Filing Support Package

March 2004

ATM CRS
Verizon Rhode Island

Tariff Filing Support Package

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Verizon Local Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS): Tariff Introduction

Section 1 - Service Description

Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS) is a telecommunications transport and switching service that provides for high-speed connectivity between and among Customer-designated locations. ATM supports user applications requiring high-bandwidth, high-performance transport and switching. ATM will carry mixed-media traffic — ranging from sensitive voice and video to best-effort web-browser based (data) traffic. ATM combines the multiplexing and bandwidth efficiency of packet switching with the predictability and reliability of circuit switching.

Section 2 - How ATM CRS Works

ATM CRS is a packet switching technology. Unlike other packet switching technologies — such as Internet Protocol (IP), Frame Relay, and X.25 that use variable length packets (envelopes) to carry data, ATM uses fixed length packets (cells) to carry the data. Fixed length cells enable the cell switching to be implemented in hardware rather than software. Hardware switching enables ATM to support very high speed switching and interface rates. ATM cells are 53 bytes long. Of the 53 bytes, 5 bytes are header (used to identify the cell and how it should be treated by the network) and the remaining 48 bytes carry the payload (user data).

An ATM network is made up of ATM switches, ATM trunks that interconnect ATM switches, and User-to-Network interfaces (UNIs) that connect user-ATM equipment to the switches. Typically, ATM switches receive ATM cells from UNI ports and switch the cells onto the proper virtual circuit on the proper port (UNI) to route the cells to their destination.

ATM is a connection-based networking service. Virtual connections must be set-up prior to any data transfer. The ATM cell header contains the information needed to identify the virtual connection through the network that it must take to travel from its source to destination. When a connection is set-up, a table is created in each switch along the path. The table contains the port and circuit ID on which cells belonging to the connection will arrive, and the port and circuit ID on which the cells belonging to the connection will leave. The switch moves the cells between the input and output ports, mapping the circuit IDs as appropriate.

Section 3 - Additional Features and Functionality

UNIs are available in various configurations — including Port With Access Line Connection and Port-Only Connection with either incremental or full bandwidth. The UNI Port With Access Line Connection is a dedicated digital line that provides a link from the customer's premises to one of the Company's ATM CRS hubs. UNIs are also provisioned as a Port-Only Connection. This connectivity is provided via Permanent Virtual Circuits (PVCs) and/or Switched Virtual Circuits (SVCs) that are implemented over access facilities and switches that are dedicated to high-speed telecommunications services. A PVC connection is provisioned by a Verizon technician. PVCs are usually used for long duration connections. An SVC connection is established automatically using a signaling protocol sent by the Customer Premises Equipment

(CPE) to the network. When the application is complete, the CPE sends a disconnect message. SVCs are usually used for short duration connections and allow customers to dynamically set-up and take down connections as their applications require – without the intervention of Verizon provisioning processes.

PVCs and SVCs may be provided on a point-to-point or point-to-multipoint basis. When a virtual circuit is provided as a point-to-point virtual connection, transmission is bi-directional, allowing for ATM cells to be transmitted or received over the same PVC. For point-to-multipoint virtual connections, transmission is provided as transmit only, from the source to multiple receiving locations. The most important aspect of ATM is its ability to carry mixed-media traffic. This capability enables the convergence of multiple applications across the same backbone trunks and access links. The benefits of convergence are many, however, the main benefit is cost efficiency. This efficiency is gained in many areas including reduced access costs, reduced trunk costs, the elimination of the need to create several separate networks to carry the different traffic types and the costs associated with that (e.g. operational cost reduction, flexibility, etc.).

To support mixed media traffic, ATM networks must classify traffic and maintain the appropriate quality of service for each class of traffic. Verizon supports four (4) Quality of Service (QoS) Classes:

1. Constant Bit Rate (CBR): This service category is intended for real time traffic that requires tightly constrained cell transfer delay (CTD) and cell delay variation (CDV) and needs to be handled by fixed bandwidth. It is characterized by a peak cell rate (PCR) value that is continually available during the lifetime of the connection. A CBR source may emit cells at or below the PCR any time and for any duration. CBR applications are voice and fixed rate coded video applications and circuit emulation services (CES).
2. Variable Bit Rate – real time (VBR-rt): This service category is intended for real-time traffic from bursty sources. It can usually tolerate statistical multiplexing with traffic from different sources. It is characterized by a peak cell rate (PCR) value, a sustainable cell rate (SCR), and a maximum burst size (MBS). Cells, which are delayed beyond the value specified by the CDT, are assumed to be of significantly less value to the application. An example of a VBRrt application is variable bit rate coded video.
3. Variable Bit Rate – non-real time (VBR-nrt): This service category is intended for applications that have bursty traffic and do not have tight constraints on the delay and delay variation. Like VBRrt, the traffic parameters are PCR, SCR and MBS. It permits statistical multiplexing of traffic from different sources. It expects a low cell loss ratio (CLR). An example of a VBRnrt application is data.
4. Unspecified Bit Rate (UBR): This service category is a “best effort” service which means there are no specified parameters with no assurances that the traffic will be delivered across the network to the target device. UBR is intended for non-critical applications that do not require tight constraints on the delay and delay variation, or a specified QoS. It permits statistical multiplexing with traffic from different sources and does not specify traffic-related service guarantees.

The ability to create Closed User Groups (CUGs) provides a network-wide mechanism for access control. CUGs provide a logical grouping of UNIs, creating a community of interest while simultaneously blocking signaling messages from unauthorized users so that only intra-CUG calls are completed.

Section 4 - Application of Rates

The following rate elements are applicable to ATM CRS and are explained in greater detail below:

1. User Network Interfaces (UNIs) Port With Access Line Connection
2. User Network Interfaces (UNIs) Port Only Connection
3. Permanent Virtual Circuits (PVCs) and Switched Virtual Circuits (SVCs)
4. Effective Bandwidth for Incremental UNIs
5. Closed User Groups (CUG)
6. Administrative Charge

1. User Network Interfaces (UNIs) Port With Access Line Connection:

A monthly rate applies on a per Port With Access Line Connection basis, based on the speed (i.e., DS1, DS3, OC3c or OC12c) and/or type (i.e., Full or Incremental bandwidth, SONET, Protected or Protected Diverse) of the access connection. UNI Port With Access Line Connection is offered under one-year, two-year, three-year or five-year Extended Service Plans (ESP). No nonrecurring charges apply.

2. User Network Interfaces (UNIs) Port-Only Connection:

A monthly rate applies on a per Port Only basis, based on the speed (i.e., DS1, DS3, OC3c or OC12c) and/or type (i.e., Full or Incremental bandwidth) of the port only connection. UNI Port Only is offered under one-year, two-year, three-year or five-year Extended Service Plans (ESP). No nonrecurring charges apply.

3. Permanent Virtual Circuit (PVCs) and Switched Virtual Circuits (SVCs):

A nonrecurring charge per order for Virtual Channel Connection (VCC) or Virtual Path Connection (VPC). PVCs/SVCs are ordered per UNI. If multiple UNIs are involved, a nonrecurring charge will apply to each UNI Port on which the virtual connections will reside. The nonrecurring charge does not apply when PVCs/SVCs are installed at the same time as the respective UNIs.

4. Effective Bandwidth for Incremental UNIs:

A monthly rate applies for incremental UNIs for CBR or VBR PVC and SVC bandwidth at 5 Mbps for DS3 or OC3c and at 15 Mbps for OC12c. A monthly rate also applies for incremental UNIs for UBR PVC and SVC bandwidth for DS3, OC3c and OC12c. No nonrecurring charges apply.

The monthly rate for PVC and/or SVC Unspecified Bit Rate bandwidth will be waived when the combined Variable Bit Rate and Constant Bit Rate effective bandwidth purchased (either SVC or PVC or any combination) is equal to at least 50% of the effective bandwidth capacity of the UNI. When UBR bandwidth is made available, it is available for both PVCs and SVCs. No nonrecurring charges apply.

5. Closed User Group (CUG):

A nonrecurring charge applies per order and per UNI for each CUG established and for each subsequent CUG member added to a CUG. The nonrecurring charge does not apply when a CUG is installed at the same time as the respective UNI.

6. Administrative Charge:

A nonrecurring charge applies (per order or per UNI) when a customer initiates a change to one or more of the following: UNI bandwidth, PVCs, class of service parameters, and/or other service parameters that do not require changes in physical facilities and that can be provisioned by the Company without the dispatch of a technician to the customer location. For each service order issued, the charge will be one Administrative Charge regardless of the number of changes made.

The Administrative Charge does not apply for those items ordered on the same service order with the installation of a UNI.

Verizon certifies that the rates for ATM CRS are not less than the Long-run Incremental Cost of providing the service.

Section 5 - Termination Liability

In the event the service is terminated by the Customer prior to completion of the current term commitment period, the Customer shall be liable for an early termination charge, except as noted below. The amount of the early termination charge will be 25% of the monthly recurring charge(s) (MRC) for the remainder of the term. For example:

$25\% \times \text{MRC} \times \# \text{ of Lines/Channels/Paths} \times \text{Remainder of Term} = \text{Termination Charge}$

Early termination charges will apply only to those rate elements under a term commitment period. If any rates for the service are increased during the term period, exclusive of any increase due to local, state or federal fees, taxes or surcharges, the Customer may terminate the service without incurring an early termination charge.

Early termination charges will not be assessed under the following circumstances:

- Customer moves existing service to a new location within the same address and/or same building (inside move) and maintains that service for the remainder of the term;
- Customer converts to a new term commitment plan for the same service before the current term commitment expires and the value of the new term commitment is equal to or greater than the remaining value of the current term commitment; or
- Customer upgrades service to a higher speed or capacity under a term commitment, provided the following conditions are met:
 1. The value of the new term commitment is equal to or greater than the remaining value of the current term commitment,
 2. Both the existing and the new services are provided solely by the Company, and
 3. The order to discontinue the existing service and the order for the new or upgraded service are received by the Company at the same time.

Section 6 - Target Market and Intended Use

Large business, government and education are the target markets for Local ATM in Verizon. Because ATM has the ability to support multi-media traffic (i.e. data, voice and video), customers can run unique applications over ATM. Using ATM, Medical Centers employ medical imaging, businesses have video-conferencing abilities and many county court systems have remote arraignments (which, in addition to being cost effective and reducing transportation costs, offers a much more secure option than transporting prisoners for hearings). Also, universities use distance learning with ATM; Internet Service Providers (ISPs) run DSL over ATM; and ATM provides LAN-to-LAN connection for larger customers. Additional applications are as follow: Any-to-Any connectivity, remote training and call-volume management. Rhode Island ATM offering will align with the National ATM Verizon offering for a complete ATM circuit that spans the entire, domestic Verizon footprint in both local and long distance jurisdictions.

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Verizon New England Inc.

1. Advanced Data Services
1.5.1 Asynchronous Transfer Mode Cell Relay Service

(N)

1.5.1 General	
A.	This section contains definition, regulations and charges applicable to the provision of Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS) furnished by the Company within the State of Rhode Island, where conditions and facilities permit.

1.5.2 Definitions of Terms and Abbreviations	
A.	In addition to the General Definitions set forth in PUC 15, Part D, Section 1.1 the following definitions apply:
1.	Best Effort Service — A term for Quality of Service (QoS) class with no specified parameters and with no assurances that the traffic will be delivered across the network to the target device.
2.	Cell — A unit of transmission in Asynchronous Transfer Mode (ATM). A cell is a fixed-size packet consisting of a 48-octet payload and 5 octets of control overhead in the form of a header.
3.	Cell Delay Variation Tolerance (CDVT) — The amount of variation permitted for early arrival of clusters of cells at the source UNI. Cells exceeding the tolerance will be declared non-conforming and will be discarded.
4.	Constant Bit Rate (CBR) — One of four ATM Qualities of Service (QoS) supported by Verizon. CBR is a steady flow of user information required to support applications where variable delays in transmission would negatively impact the information content. Examples of applications requiring CBR are voice, and some types of video.
5.	Hub — A Company designated serving wire center that is equipped to provide service.
6.	Maximum Burst Size (MBS) — The maximum number of cells that can be passed to the service provider's network in a single burst at a rate that exceeds the Sustained Cell Rate (SCR, see 1.5.2.A.6 below), but does not exceed the Peak Cell Rate (PCR, see 1.5.2.A.5 below) assigned to the Variable Bit Rate (VBR, see 1.5.2.A.8 below) connection. Cells exceeding the MBS will be declared as nonconforming and will be discarded.
7.	Peak Cell Rate (PCR) — The highest available rate of information transfer on a VBR connection, and the continuous cell rate allowed for CBR. Cells exceeding the sustained cell rate and below the peak cell rate will be limited to a maximum burst size.
8.	Sustained Cell Rate (SCR) — The maximum rate at which VBR cells may be constantly transmitted with a high assurance that no cells will be lost. Cells transmitted within the SCR have the highest priority of the VBR traffic and will not be tagged as eligible for discard.
9.	Synchronous Optical Network (SONET) — A standards based fiber optic communication network that transports both asynchronous and synchronous digital signals using the Synchronous Transport Signal (STS) format. As defined in this service offering, ATM SONET UNI connections are provisioned as a survivable service with an alternate (not diverse) route.
10.	Unspecified Bit Rate (UBR) — One of four ATM Qualities of Service (QoS) supported by Verizon, UBR is a best-effort service with no performance guarantees. UBR is best suited for applications that are not delay sensitive such as web browsing, e-mail or data base queries.

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Verizon New England Inc.

1. Advanced Data Services

1.5 Asynchronous Transfer Mode Cell Relay Service

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1.5.2 Definitions of Terms and Abbreviations	
11.	Variable Bit Rate (VBR) — Two of the four ATM Qualities of Service (QoS) supported by Verizon. VBR is a flow of information that is bursty and does not flow at a constant rate. VBR is available as Real Time (VBRrt) and VBR non-real time (VBRnrt). An example of an application using VBR is Local Area Network (LAN) traffic.
12.	Virtual Channel Connection (VCC) — A connection set up by the Telephone Company based on information contained on a service order rather than by dial-up signaling. A Virtual Channel Connection (VCC) is a type of PVC, with independent identity and defined service parameters, that is provisioned via service order, and cannot be altered by the customer without additional service order activity.
13.	Virtual Path Connection (VPC) — A type of PVC with defined service parameters that is provisioned via service order. Customers may provision their own virtual channels within the VPC, provided that the sum of the service parameters of all of the virtual channels does not exceed the aggregate service parameters of the VPC.

1.5.3 Description	
A.	<p>Asynchronous Transfer Mode (ATM) Cell Relay Service (CRS) is a telecommunications transport and switching service that provides for high-speed connectivity between Customer-designated locations. ATM CRS consists of a User Network Interface (UNI). This interface is available in various configurations including Port With Access Line Connection and Port Only Connection, with either incremental or full bandwidth.</p> <p>The UNI Port With Access Line Connection is a dedicated digital line that provides a link from the Customer's premises to one of Company's ATM CRS hubs. UNIs are also provisioned as a Port Only Connection as defined in 1.5.4.A.2.</p> <p>ATM CRS is a fast-packet, cell-based technology that can support user applications requiring high-bandwidth, high-performance transport and switching. This connectivity is provided via Permanent Virtual Circuits (PVCs) and/or Switched Virtual Circuits (SVCs) that are implemented over access facilities and switches that are dedicated to high-speed telecommunications services.</p> <p>UNIs, Port Only Connections, PVCs and SVCs are further described in 1.5.4.</p>

1.5.4 Service Components	
A.	<p>ATM CRS consist of the following components:</p> <p>1. User Network Interface (UNI) Port With Access Line Connections, which are available at the DS1, DS3, OC3c, and OC12c levels, provide dedicated transport between Customer-designated premises and an ATM CRS hub. There are two types of UNIs: Full and Incremental. The Full UNI includes all available bandwidth in one rate, and the Incremental UNI is sold and provisioned with PVC and/or SVC bandwidth increments. The DS1 UNI is not offered in increments.</p> <p>In order for Customer traffic to be carried on the network, each Incremental UNI requires at least one 5 Mbps or 15 Mbps increment of either PVC or SVC bandwidth. The Customer may elect to subscribe to multiple PVCs. This feature is established over the UNI via connection identifiers, which enable the Customer to have virtual connections to various locations.</p>

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Verizon New England Inc.

1. Advanced Data Services
1.5 Asynchronous Transfer Mode Cell Relay Service

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1.5.4 Service Components	
A. (Cont'd)	
	<p>UNIs are provided at nominal data rates of 1.544 Mbps (DS1), 44.736 Mbps (DS3), 155.52 Mbps (OC3c), or 622 Mbps (OC12c). OC3c and OC12c are provided as a concatenated signal in STS-3c and STS-12c (Synchronous Transport Signal) formats, respectively. The actual throughput into CRS is less than the line rate for the UNI provided.</p> <p>The rates and charges for a UNI are differentiated by the capacity of the UNI, the location where the UNI originates (i.e., Customer-designated premises) and mileage ranges (expressed as tiers) associated with extending the UNI to the wire center designated as the ATM CRS hub.</p> <p>The OC3c UNI Port With Access Line Connections are provisioned on either Unprotected, Protected or Protected Diverse Synchronous Optical Network (SONET) facilities. The OC12c UNIs are provisioned on either Protected or Protected Diverse SONET facilities. SONET is a standards-based fiber optic communication network that transports both asynchronous and synchronous digital signals using the Synchronous Transport Signal (STS) format. ATM OC3c and OC12c Protected SONET UNI Port With Access Line Connections are provisioned over SONET as a survivable service with an alternate (not diverse) facility between the central office and the Customer premises. ATM OC3c and OC12c Protected Diverse SONET UNI Port With Access Line Connections are provisioned over SONET as a survivable service with an alternate and diverse path between the ATM CRS hub and the Customer premises. Unprotected SONET UNI is a type of OC3c ATM UNI that is provisioned over SONET with no alternate facility between the ATM CRS hub and the customer premises. DS3, OC3c, OC12c and other interfaces, both electrical and optical, are supported and defined by the technical specifications set forth in 1.5.5.</p>
2.	<p>Port Only Connections - can be established as a User Network Interface (UNI) arrangement. The UNI Port Only connection provides an ATM Cell Relay Network connection based on the port connection speeds of DS1, DS3, OC3c and OC12c. The ATM port speed will be consistent with the channel speed of the access channel. The actual throughput of Customer traffic cannot exceed the bandwidth of the access channel and port speed.</p> <p>UNI Port Only Connections are available as either Incremental or Full. This refers to the bandwidth that is required to provision PVCs on the port. Incremental ports come with no bandwidth and bandwidth is purchased in increments based on Customer bandwidth requirements. Full ports come with all bandwidth included up to the maximum rate of the port. Each port can accommodate multiple PVCs or SVCs depending on the bandwidth purchased. UNI Port Only is available with one-year, two-year, three-year and five-year terms.</p> <p>Customers may access Port Only Connections via Company-provided digital access facilities or via facilities provided by another carrier. When access facilities are provided by the Company, the associated regulations, rates and charges under the appropriate Company Tariff shall apply in addition to the regulations, rates and charges associated with ATM CRS. Company-provided access facilities may also be provisioned on an Individual Case Basis (ICB) where access facilities are not generally available under the applicable tariff. Interconnection charges to connect access line services provided by the Company or another carrier may apply and will be billed separately. Any special construction or nonstandard charges assessed by the carrier supplying the access facilities will be the responsibility of the Customer.</p>

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1. Advanced Data Services

1.5 Asynchronous Transfer Mode Cell Relay Service

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1.5.4 Service Components	
A. (Cont'd)	
3.	<p>Permanent Virtual Circuit (PVC) - The PVC defines a virtual connection across a UNI between the Customer premises and Company's ATM CRS hub. Each UNI requires at least one PVC in order for Customer traffic to traverse the network. Each ATM cell carries a unique tag which identifies that ATM CRS cell as belonging to a particular PVC. A PVC is a logical channel connecting two or more Customer-designated premises with virtual connections through a Company provided ATM CRS switch(es). The PVCs may be provided on a point-to-point or point-to-multipoint basis. When a PVC is provided as a point-to-point virtual connection, transmission is bi-directional allowing for ATM CRS cells to be transmitted or received over the same PVC. For point-to-multipoint virtual connections, transmission is provided as transmit only. The virtual connection is set up by the Company based on information contained on a service order rather than by dial-up signaling.</p> <p>PVCs consist of two types: Virtual Channel Connections (VCCs) and Virtual Path Connections (VPCs). A VCC is a type of PVC with independent identity and defined service parameters that are provisioned via service order, and cannot be altered by the Customer without additional service order activity. A VPC is a type of PVC with defined service parameters that is provisioned via service order. Customers may provision their own virtual channels within the VPC, provided that the sum of the service parameters of all of the virtual channels does not exceed the aggregate service parameters of the VPC.</p>
4.	<p>Switched Virtual Circuit (SVC) is similar in structure to PVCs, but SVCs are provisioned on demand by Customer premises equipment that signals the ATM cell relay network to set up and tear down logical connections. The network will respond to these requests by provisioning a virtual connection across the network based on the quality of service parameters requested, provided that sufficient network resources are available to establish the connection. Each UNI that is SVC signal enabled will be provided with a SVC International Code Designator (ICD) prefix that will uniquely identify the UNI. Customers must use this Company assigned prefix when requesting SVC virtual connections across the Company Cell Relay Network. Each Constant Bit Rate (CBR) and Variable Bit Rate (VBR) SVC will be limited to a maximum Peak Cell Rate of 20 Mbps and a maximum Sustained Cell Rate of 20 Mbps.</p> <p>Closed User Group (CUG) capability is a feature associated with SVCs. A CUG provides the ability to contain SVC calls between certain UNIs. A CUG functionally groups UNIs into logical associations and allows calling privileges to be specified network wide. A CUG provides a network-wide mechanism for access control. CUGs provide a logical grouping of UNIs, creating a SVC community of interest.</p>
5.	<p>Effective Bandwidth is reserved for each logical connection (PVC or SVC) that is set-up across a UNI. It is based on the Peak Cell Rate (PCR), Sustained Cell Rate (SCR), Maximum Burst Size, and the quality of service parameters selected, i.e., CBR, VBRrt (Variable Bit Rate real time), VBRnrt (Variable Bit Rate non-real time), or UBR (Unspecified Bit Rate). The total effective bandwidth of all the logical connections on a UNI cannot exceed the total bandwidth available on the UNI. Effective bandwidth prices do not vary by quality of service level selected. However, effective bandwidth is consumed in varying degrees based on the quality of service parameters selected. The higher the quality of service, the more bandwidth will be reserved. A CBR PVC with the same PCR as a VBR PVC will reserve more effective bandwidth.</p>

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1. Advanced Data Services
1.5 Asynchronous Transfer Mode Cell Relay Service

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1.5.5 Technical Specifications	
A.	Technical Specifications are delineated as follows:
1.	ATM CRS - Technical References TR-NWT-001112, GR-1110-CORE, GR-1248-CORE, and SR-3330.
2.	DS1 and DS3 signals - in TR-INS-000342.
3.	OC3c and OC12c signals – in GR-253-CORE, Issue 2.
4.	UNIs - in ATM Forum ATM User Network Interface Specifications V3.0, af-uni-0010.001, and V3.1, af-uni-0010.002.
a.	Interface specifications for Customer-provided ATM CRS compatible premises equipment or devices must also be in accordance with the specifications defined in these documents.

1.5.6 Regulations	
A.	Provision of Service
1.	At least one UNI Port With Access Line or Port Only, which has a maximum nominal capacity for DS1 (1.544Mbps), DS3 (45 Mbps), OC3c (155 Mbps), or OC12c (622 Mbps), must be provided. The OC3c UNIs are provisioned over Unprotected, Protected or Protected Diverse SONET facilities. The OC12c UNIs are provisioned over Protected or Protected Diverse SONET facilities. The Protected OC3c and OC12c SONET facilities provide a backup facility that automatically switches in the event of a failure on the primary facility. The Unprotected OC3c SONET facilities do not have an alternate facility.
2.	Unlimited usage is provided with each purchased bandwidth.
3.	Incremental UNIs must have at least one increment of effective bandwidth (either PVC or SVC) in order for traffic to traverse the network. The DS1, DS3, OC3c, and OC12c Full UNIs are equipped with the full effective bandwidth.
4.	When PVC bandwidth is purchased, one or more PVCs must be selected for Customer traffic to traverse the network.
5.	Two types of PVCs, Virtual Channel Connections (VCCs) and Virtual Path Connections (VPCs) support the following Quality of Service (QoS) Classes.
a.	Constant Bit Rate (CBR)
b.	Variable Bit Rate real time (VBRrt)
c.	Variable Bit Rate non-real time (VBRnrt)
d.	Unspecified Bit Rate (UBR)
B.	Tier Structure for Local Serving Offices
1.	Locations (wire centers) that provide ATM CRS have been designated as ATM hubs. Each local serving office has been placed in Tier 1, 2 or 3, based on its location relative to the closest ATM CRS hub.

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1.5.6 Regulations	
C.	<p>Service Functionality</p> <p>1. The ATM CRS functionality consists of transporting 53-byte cells of information from the Customer location to a Company ATM hub over a UNI. The traffic is routed in the switch to another UNI, or other suitable network connection.</p>
D.	<p>The ATM CRS customer selects certain QoS classes with related parameters designed to support the intended application and/or CPE.</p> <p>1. Constant Bit Rate (CBR) supports the following parameters:</p> <ul style="list-style-type: none"> a. Peak/Sustained Cell Rate consists of customer specified increments of 64 Kbps up to the maximum speed of the UNI. b. Non-conforming cells are discarded. c. Cell Delay Variation Tolerance (CDVT) levels are as follows: DS1 = 600 microseconds DS3 = 600 microseconds OC3c = 600 microseconds OC12c = 600 microseconds
2.	<p>Variable Bit Rate (VBR) (Real Time/Non-Real Time) supports the following parameters:</p> <ul style="list-style-type: none"> a. Sustained Cell Rate (SCR) consists of customer specified in increments of 64 Kbps up to the maximum speed of the UNI. b. Peak Cell Rate (PCR) consists of customer selectable increments of 64 Kbps up to line rate. Default is 200% of SCR for PVCs. (The ratio of PCR to SCR will be signaled by CPE for SVCs. Therefore there is no default value.) c. Non-conforming cells are discarded. d. Cell Delay Variation Tolerance (CDVT) levels are as follows: DS1 = 600 microseconds DS3 = 600 microseconds OC3c = 600 microseconds OC12c = 600 microseconds e. Maximum Burst Size (MBS): Is customer selectable Has a default of 100 cells on PVCs Is dependent upon the signaling on SVCs
3.	<p>Unspecified Bit Rate (UBR) supports the following parameters:</p> <ul style="list-style-type: none"> a. Has no QoS descriptors, i.e. CBR or VBR b. Is a Best-effort service c. Discards cells exceeding network capacity

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1.5.6 Regulations	
E.	Special Conditions
1.	ATM CRS is available where facilities and conditions permit. For locations where the Customer requests ATM CRS and digital or SONET facilities are not available, special construction charges may apply.
2.	Maintenance Window – To meet the Customer's requirements, occasional network upgrades must be performed. These network upgrades are needed to provide improved performance and new features. Generally these upgrades will be performed between the hours of 11 PM and 8 AM. Network upgrades are planned to provide Customers reasonable and timely notification in order to minimize any impact on the Customer's service.
F.	The minimum period for ATM CRS is one month. Termination charges may apply.

1.5.7 Responsibility of the Customer	
A.	The Customer must provide the necessary compatible premise equipment or ATM CRS device capable of interfacing with the Company's ATM CRS.

1.5.8 Responsibility of the Telephone Company	
A.	The Telephone Company is responsible for service up to and including the network interface. The Telephone Company's responsibility is limited to the furnishing of communications facilities and switches suitable for ATM CRS.

1.5.9 Application of Rates and Charges	
A.	Monthly Rates – Apply to User Network Interfaces (UNIs) Port With Access Line Connection, User Network Interfaces (UNIs) Port Only Connection and Effective Bandwidth for Incremental.
1.	User Network Interfaces (UNIs) Port With Access Line Connection - A monthly rate applies on a per Port With Access Line basis, based on the speed (i.e., DS1, DS3, OC3c or OC12c) and/or type (i.e., Full or Incremental, SONET, Protected or Protected Diverse) of the access connection. UNI Port and Access is offered as a one-year, two-year, three-year or five-year Extended Service Plan (ESP). No nonrecurring charges apply.
2.	User Network Interfaces (UNIs) Port Only Connection - A monthly rate applies on a per Port Only basis, based on the speed (i.e., DS1, DS3, OC3c or OC12c) and/or type (i.e., Full or Incremental) of the port only connection. UNI Port Only is offered as a one-year, two-year, three-year or five-year Extended Service Plan (ESP). No nonrecurring charges apply.

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1. Advanced Data Services

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1.5.9 Application of Rates and Charges	
A. (Cont'd)	
3.	<p>Effective Bandwidth for Incremental UNIs - A monthly rate applies for incremental UNIs for CBR or VBR PVC and SVC bandwidth at 5 Mbps for DS3 or OC3c and at 15 Mbps for OC12c. A monthly rate also applies for incremental UNIs for UBR PVC and SVC bandwidth for DS3, OC3c and OC12c. No nonrecurring charges apply.</p> <p>The monthly rate for PVC and/or SVC UBR bandwidth will be waived when the combined VBR and CBR effective bandwidth purchased (either SVC or PVC or any combination) is equal to at least 50% of the effective bandwidth capacity of the UNI. When UBR bandwidth is made available, it is available for both PVCs and SVCs. No nonrecurring charges apply.</p>
B.	<p>Nonrecurring Charges – Apply to Permanent Virtual Circuits (PVCs), Closed User Groups (CUG) and Administrative Charge.</p> <p>1. Permanent Virtual Circuits (PVCs) - A nonrecurring charge applies per order for Virtual Channel Connection (VCC) or Virtual Path Connection (VPC). PVCs are ordered per UNI. If multiple UNIs are involved, a nonrecurring charge will apply to each UNI on which the virtual connections will reside. The nonrecurring charge does not apply when PVCs are installed at the same time as the respective UNI.</p> <p>2. Closed User Groups (CUG) – A nonrecurring charge applies per order and per UNI for each CUG established and for each subsequent CUG member added to a CUG. The nonrecurring charge does not apply when a CUG is installed at the same time as the respective UNI.</p> <p>3. Administrative Charge – A nonrecurring charge applies (per order, per UNI) when Customer initiates a change to one or more of the following: UNI bandwidth, PVCs, quality of service parameters and/or other service parameters that do not require changes in physical facilities and that can be provisioned by Company without the dispatch of a technician to Customer location. For each service order issued, the charge will be one Administrative Charge regardless of the number of changes made. The Administrative Charge does not apply for those items ordered on the same service order with the installation of a UNI.</p>
C.	<p>Special Facilities Routing – The Customer may request that the facilities used to provide ATM CRS be specially routed. Additional charges will apply based on cost.</p>
D.	<p>Acceptance Testing – At no additional charge, the Company will, at the Customer's request, cooperatively test, at the time of installation. Acceptance tests will include tests for the parameters applicable to the service as specified in the order for service.</p>
E.	<p>Moves – When the Customer requests a move or relocation of the UNI, the move or relocation will be treated as a termination of the existing service and the establishment of a new service for the application of all charges.</p>

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1.5.10 Extended Service Plan (ESP)	
A.	<p>The ATM CRS UNI Port and Access and Port Only rate elements are available under an ESP.</p> <p>ESPs are comprised of term commitments of one, two, three and five years at the applicable rates set forth in Part M, Section 4.3. Rate elements must be ordered under the same ESP period.</p>

1.5.11 Termination Liability	
A.	<p>In the event the service is terminated by the Customer prior to completion of the current term commitment period, the Customer shall be liable for an early termination charge, except as noted below. The amount of the early termination charge will be 25% of the monthly recurring charge(s) (MRC) for the remainder of the term. For example:</p> <p style="text-align: center;">$25\% \times \text{MRC} \times \# \text{ of Lines/Channels/Paths} \times \text{Remainder of Term} = \text{Termination Charge}$</p>
B.	<p>Early termination charges will apply only to those rate elements under a term commitment. If any rates for the service are increased during the term period, exclusive of any increase due to local, state or federal fees, taxes or surcharges, the Customer may terminate the service without incurring an early termination charge.</p>
C.	<p>Prior to the end of the term commitment period, the Customer may select one of the following options, to be effective at the end of the term:</p> <ul style="list-style-type: none"> Renew their term commitment, Commit to a new term period, Arrange for a change of service, or Arrange for termination of the service. <p>In the event the Customer does not select one of the above options, the Customer will be converted to the shortest-term period available under tariff (i.e., one-year term, etc.) for the same service and will be subject to the applicable term commitment, if any, unless the Customer terminates the service within sixty (60) days of the conversion date.</p>

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1.5.11 Termination Liability	
D.	Early termination charges will not be assessed under the following circumstances:
1.	Customer moves existing service to a new location within the same address and/or same building (inside move) and maintains that service for the remainder of the term;
2.	Customer renegotiates a new term commitment plan for the same service before the current term commitment expires and the value of the new term commitment is equal to or greater than the remaining value of the current term commitment; or
3.	Customer upgrades service to a higher speed or capacity under a term commitment, provided the following conditions are met:
a.	The value of the new term commitment is equal to or greater than the remaining value of the current term commitment,
b.	The Company provides both the existing and the new service via tariff or on an individual case basis (ICB), and
c.	The order to discontinue the existing service and the order for the new or upgraded service are received by the Company at the same time.

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection					
ID	Service Category	Rate Element	Rate	USOC	
	DS1 Full Bandwidth	Tier 1 – 12 Months - Monthly	813.00		
		Tier 1 – 24 Months - Monthly	772.35		
		Tier 1 – 36 Months - Monthly	691.05		
		Tier 1 – 60 Months - Monthly	650.40		
		Tier 2 – 12 Months - Monthly	813.00		
		Tier 2 – 24 Months - Monthly	772.35		
		Tier 2 – 36 Months - Monthly	691.05		
		Tier 2 - 60 Months - Monthly	650.40		
		Tier 3 – 12 Months - Monthly	813.00		
		Tier 3 – 24 Months - Monthly	772.35		
		Tier 3 – 36 Months - Monthly	691.05		
		Tier 3 - 60 Months - Monthly	650.40		
		DS3 - Full Bandwidth	Tier 1 – 12 Months - Monthly	2,891.00	
			Tier 1 – 24 Months - Monthly	2,746.45	
	Tier 1 – 36 Months - Monthly		2,457.35		
	Tier 1 – 60 Months - Monthly		2,312.80		
	Tier 2 – 12 Months - Monthly		4,704.00		
	Tier 2 – 24 Months - Monthly		4,468.45		
	Tier 2 – 36 Months - Monthly		3,998.40		
	Tier 2 - 60 Months - Monthly		3,763.20		
	Tier 3 – 12 Months - Monthly		7,891.00		
	Tier 3 – 24 Months - Monthly		7,496.45		
	Tier 3 – 36 Months - Monthly		6,707.35		
	Tier 3 - 60 Months - Monthly		6,312.80		
	DS3 - Incremental Bandwidth		Tier 1 – 12 Months - Monthly	2,250.00	
			Tier 1 – 24 Months - Monthly	2,137.00	
		Tier 1 – 36 Months - Monthly	1,912.50		
		Tier 1 – 60 Months - Monthly	1,800.00		
		Tier 2 – 12 Months - Monthly	4,063.00		
		Tier 2 – 24 Months - Monthly	3,859.85		
		Tier 2 – 36 Months - Monthly	3,453.44		
		Tier 2 - 60 Months - Monthly	3,250.40		

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

(N)

4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection				
ID	Service Category	Rate Element	Rate	USOC
	DS3 – Incremental Bandwidth	Tier 3 – 12 Months - Monthly	7,250.00	
		Tier 3 – 24 Months - Monthly	6,887.50	
		Tier 3 – 36 Months - Monthly	6,162.50	
		Tier 3 - 60 Months - Monthly	5,800.00	
	OC3c SONET Full Bandwidth - Protected	Tier 1 – 12 Months - Monthly	5,388.00	
		Tier 1 – 24 Months - Monthly	5,118.60	
		Tier 1 – 36 Months - Monthly	4,579.80	
		Tier 1 – 60 Months - Monthly	4,310.40	
		Tier 2 – 12 Months - Monthly	7,888.00	
		Tier 2 – 24 Months - Monthly	7,493.60	
		Tier 2 – 36 Months - Monthly	6,704.80	
		Tier 2 - 60 Months - Monthly	6,310.40	
		Tier 3 – 12 Months - Monthly	11,638.00	
		Tier 3 – 24 Months - Monthly	11,056.10	
		Tier 3 – 36 Months - Monthly	9,892.30	
		Tier 3 - 60 Months - Monthly	9,310.40	
	OC3c SONET Full Bandwidth - Protected Diverse	Tier 1 – 12 Months - Monthly	5,838.00	
		Tier 1 – 24 Months - Monthly	5,546.10	
		Tier 1 – 36 Months - Monthly	4,962.30	
		Tier 1 – 60 Months - Monthly	4,670.00	
		Tier 2 – 12 Months - Monthly	8,338.00	
		Tier 2 – 24 Months - Monthly	7,921.10	
		Tier 2 – 36 Months - Monthly	7,087.30	
		Tier 2 - 60 Months - Monthly	6,670.40	
		Tier 3 – 12 Months - Monthly	12,088.00	
		Tier 3 – 24 Months - Monthly	11,483.60	
		Tier 3 – 36 Months - Monthly	10,274.80	
		Tier 3 - 60 Months - Monthly	9,670.40	

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

(N)

4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection			
OC3c SONET Full Bandwidth - Unprotected	Tier 1 – 12 Months - Monthly	4,888.00	
	Tier 1 – 24 Months - Monthly	4,643.60	
	Tier 1 – 36 Months - Monthly	4,154.80	
	Tier 1 – 60 Months - Monthly	3,910.40	
	Tier 2 – 12 Months - Monthly	7,388.00	
	Tier 2 – 24 Months - Monthly	7,018.60	
	Tier 2 – 36 Months - Monthly	6,279.80	
	Tier 2 - 60 Months - Monthly	5,910.40	
	Tier 3 – 12 Months - Monthly	11,138.00	
	Tier 3 – 24 Months - Monthly	10,581.10	
	Tier 3 – 36 Months - Monthly	9,467.30	
	Tier 3 - 60 Months - Monthly	8,910.40	
	OC3c SONET Incremental Bandwidth – Protected	Tier 1 – 12 Months - Monthly	3,250.00
Tier 1 – 24 Months - Monthly		3,087.50	
Tier 1 – 36 Months - Monthly		2,762.50	
Tier 1 – 60 Months - Monthly		2,600.00	
Tier 2 – 12 Months - Monthly		5,750.00	
Tier 2 – 24 Months - Monthly		5,462.50	
Tier 2 – 36 Months - Monthly		4,887.50	
Tier 2 - 60 Months – Monthly		4,600.00	
Tier 3 – 12 Months - Monthly		9,500.00	
Tier 3 – 24 Months - Monthly		9,025.00	
Tier 3 – 36 Months - Monthly		8,075.00	
Tier 3 - 60 Months - Monthly		7,600.00	

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

(N)

4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection				
OC3c SONET Incremental Bandwidth – Protected Diverse	Tier 1 – 12 Months - Monthly	3,700.00		
	Tier 1 – 24 Months - Monthly	3,515.00		
	Tier 1 – 36 Months - Monthly	3,145.00		
	Tier 1 – 60 Months - Monthly	2,960.00		
	Tier 2 – 12 Months - Monthly	6,200.00		
	Tier 2 – 24 Months - Monthly	5,890.00		
	Tier 2 – 36 Months - Monthly	5,270.00		
	Tier 2 - 60 Months - Monthly	4,960.00		
	Tier 3 – 12 Months - Monthly	9,950.00		
	Tier 3 – 24 Months - Monthly	9,452.50		
	Tier 3 – 36 Months - Monthly	8,457.50		
	Tier 3 - 60 Months - Monthly	7,960.00		
	OC3c SONET Incremental Bandwidth – Unprotected	Tier 1 – 12 Months - Monthly	2,750.00	
		Tier 1 – 24 Months - Monthly	2,612.50	
Tier 1 – 36 Months - Monthly		2,337.50		
Tier 1 – 60 Months - Monthly		2,200.00		
Tier 2 – 12 Months - Monthly		5,250.00		
Tier 2 – 24 Months - Monthly		4,987.50		
Tier 2 – 36 Months - Monthly		4,462.50		
Tier 2 - 60 Months – Monthly		4,200.00		
Tier 3 – 12 Months - Monthly		9,000.00		
Tier 3 – 24 Months - Monthly		8,550.00		
Tier 3 – 36 Months - Monthly		7,650.00		
Tier 3 – 60 Months - Monthly		7,200.00		

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4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

(N)

4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection			
OC12c SONET Full Bandwidth – Protected	Tier 1 – 12 Months - Monthly	15,935.00	
	Tier 1 – 24 Months - Monthly	15,138.25	
	Tier 1 – 36 Months - Monthly	13,544.75	
	Tier 1 – 60 Months - Monthly	12,748.00	
	Tier 2 – 12 Months - Monthly	23,424.00	
	Tier 2 – 24 Months - Monthly	22,252.80	
	Tier 2 – 36 Months - Monthly	19,910.40	
	Tier 2 - 60 Months - Monthly	18,739.20	
	Tier 3 – 12 Months - Monthly	34,676.00	
	Tier 3 – 24 Months - Monthly	32,942.20	
	Tier 3 – 36 Months - Monthly	29,474.60	
	Tier 3 - 60 Months - Monthly	27,740.80	
	OC12c SONET Full Bandwidth – Protected Diverse	Tier 1 – 12 Months - Monthly	17,229.00
Tier 1 – 24 Months - Monthly		16,367.55	
Tier 1 – 36 Months - Monthly		14,644.65	
Tier 1 – 60 Months - Monthly		13,783.20	
Tier 2 – 12 Months - Monthly		24,718.00	
Tier 2 – 24 Months - Monthly		23,482.10	
Tier 2 – 36 Months - Monthly		21,010.30	
Tier 2 - 60 Months – Monthly		19,774.40	
Tier 3 – 12 Months - Monthly		35,970.00	
Tier 3 – 24 Months - Monthly		34,171.50	
Tier 3 – 36 Months - Monthly		30,574.50	
Tier 3 – 60 Months - Monthly		28,776.00	

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4.3.1 ATM CRS - User Network Interface (UNI) Port With Access Line Connection			
OC12c SONET Incremental Bandwidth – Protected	Tier 1 – 12 Months - Monthly	9,750.00	
	Tier 1 – 24 Months - Monthly	9,262.50	
	Tier 1 – 36 Months - Monthly	8,287.50	
	Tier 1 – 60 Months - Monthly	7,800.00	
	Tier 2 – 12 Months - Monthly	17,250.00	
	Tier 2 – 24 Months - Monthly	16,387.50	
	Tier 2 – 36 Months - Monthly	14,662.50	
	Tier 2 - 60 Months - Monthly	13,800.00	
	Tier 3 – 12 Months - Monthly	28,500.00	
	Tier 3 – 24 Months - Monthly	27,075.00	
	Tier 3 – 36 Months - Monthly	24,225.00	
	Tier 3 - 60 Months - Monthly	22,800.00	
	OC12c SONET Incremental Bandwidth – Protected Diverse	Tier 1 – 12 Months - Monthly	11,052.00
Tier 1 – 24 Months - Monthly		10,499.40	
Tier 1 – 36 Months - Monthly		9,394.20	
Tier 1 – 60 Months - Monthly		8,841.60	
Tier 2 – 12 Months - Monthly		18,542.00	
Tier 2 – 24 Months - Monthly		17,614.90	
Tier 2 – 36 Months - Monthly		15,760.70	
Tier 2 - 60 Months – Monthly		14,833.60	
Tier 3 – 12 Months - Monthly		29,794.00	
Tier 3 – 24 Months - Monthly		29,304.30	
Tier 3 – 36 Months - Monthly		25,324.90	
Tier 3 – 60 Months - Monthly		23,835.20	

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

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4.3.2 ATM CRS - User Network Interface (UNI) Port Only				
ID	Service Category	Rate Element	Rate	USOC
	DS1 Full Bandwidth	12 Months - Monthly	489.00	
		24 Months - Monthly	464.55	
		36 Months - Monthly	415.65	
		60 Months - Monthly	391.20	
	DS3 - Full Bandwidth	12 Months - Monthly	1,766.00	
		24 Months - Monthly	1,677.70	
		36 Months - Monthly	1,501.10	
		60 Months - Monthly	1,412.80	
	DS3 – Incremental Bandwidth	12 Months - Monthly	1,125.00	
		24 Months - Monthly	1,068.75	
		36 Months - Monthly	956.25	
		60 Months - Monthly	900.00	
	OC3c – Full Bandwidth	12 Months - Monthly	3,665.00	
		24 Months - Monthly	3,481.75	
		36 Months - Monthly	3,115.25	
		60 Months - Monthly	2,932.00	
	OC3C - Incremental Bandwidth	12 Months - Monthly	1,625.00	
		24 Months - Monthly	1,543.75	
		36 Months - Monthly	1,381.25	
		60 Months - Monthly	1,300.00	
	OC12c- Full Bandwidth	12 Months - Monthly	10,125.00	
		24 Months - Monthly	9,618.75	
		36 Months - Monthly	8,606.25	
		60 Months - Monthly	8,100.00	
	OC12c - Incremental Bandwidth	12 Months - Monthly	4,875.00	
		24 Months - Monthly	4,631.25	
		36 Months - Monthly	4,143.75	
		60 Months - Monthly	3,900.00	

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4. Rates and Charges
4.3 Asynchronous Transfer Mode Cell Relay Service (ATM CRS)

4.3.3 ATM CRS - User Network Interface (UNI)				
ID	Service Category	Rate Element	Rate	USOC
	CBR or VBR PVC Bandwidth for Incremental	DS3 or OC3c - 5 Mbps – Monthly	75.00	
		OC12c – 15 Mbps – Monthly	175.00	
	– UBR PVC Bandwidth up to UNI line rate – includes SVC Bandwidth	DS3 – Monthly	375.00	
		OC3c – Monthly	1,125.00	
		O12c – Monthly	3,500.00	

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4. Rates and Charges
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4.3.4 ATM CRS – User Network Interface (UNI) – NRCs				
ID	Service Category	Rate Element	Rate	USOC
	CBR or VBR PVC Bandwidth for Incremental*	DS3 or OC3c - 5 Mbps- NRC	75.00	
		OC12c - 15 Mbps – NRC	75.00	
	– UBR PVC Bandwidth up to UNI line rate – includes SVC Bandwidth*	DS3 – NRC	75.00	
		OC3c – NRC	75.00	
		OC12c – NRC	75.00	
	Permanent Virtual Circuits (PVCs) for DS1, DS3, OC3c or OC12c SONET – Virtual Channel Connections (VCCs)**	Per Order – Constant Bit Rate (CBR)	75.00	
		Per Order – Variable Bit Rate - Real Time (VBRrt)	75.00	
		Per Order – Variable Bit Rate – Non-Real Time (VBRnrt)	75.00	
		Per Order – Unspecified Bit Rate (UBR)	75.00	
	Permanent Virtual Circuits (PVCs) for DS1, DS3, OC3c or OC12c SONET – Virtual Path Connections (VPCs)**	Per Order – Constant Bit Rate (CBR)	75.00	
		Per Order – Variable Bit Rate - Real Time (VBRrt)	75.00	
		Per Order – Variable Bit Rate – Non-Real Time (VBRnrt)	75.00	
		Per Order – Unspecified Bit Rate (UBR)	75.00	
	Closed User Group***	Per Order, Per UNI – Each CUG	75.00	
		Per Order, Per UNI – Each subsequent CUG member added to a CUG	75.00	
	Administrative Charge****	Per Order	75.00	

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* NRC applies per service order. The NRC will be waived when bandwidth is installed at the same time as the respective UNI.

** Applies per order and in lieu of service charges found elsewhere in this Tariff or other Company Tariffs. If multiple UNIs are involved, a nonrecurring charge will apply to each UNI Port on which the virtual connections will reside. The nonrecurring charge does not apply when PVCs are installed at the same time as the respective UNIs.

*** Applies per order, per UNI, and in lieu of service charges found elsewhere in this Tariff or other Company Tariffs. The nonrecurring charge does not apply when a CUG is installed at the same time as the respective UNI.

**** Applies per order, per UNI, and in lieu of service charges found elsewhere in this Tariff or other Company Tariffs. The nonrecurring charge does not apply for those items ordered on the same service order with the installation of a UNI.

Effective: April 1, 2004

Vice President Regulatory-RI